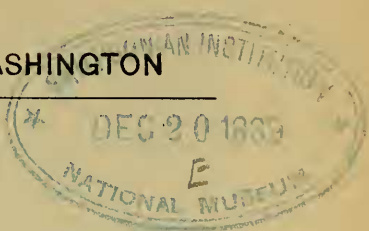


PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON



THE NORTH AMERICAN SPECIES OF THE GENUS
LAELIUS ASHMEAD (HYMENOPTERA:
BETHYLIDAE).

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Laelius is a poorly known genus of which only occasional individuals have been either collected or reared. Accordingly, I was surprised recently to receive from E. A. Back, of this Bureau, twenty specimens which had been reared by him from the furniture carpet beetle, *Anthrenus vorax* Waterh., at Washington, D. C. This series was found to represent an undescribed species, and since a name for it had been requested by Dr. Back, a description was prepared. It has seemed advisable, however, to publish at the same time a synopsis of the North American species of the genus in order to facilitate recognition of these forms and to indicate certain obvious new synonymy. The following brief review is based on the material in the collection of the U. S. National Museum. This is too inadequate to permit a completely satisfactory study of the genus, and the present paper can, therefore, be regarded as only a preliminary effort to define the few North American species that are now known.

The genus *Laelius*, which was established by Ashmead in 1893 (Bull. U. S. Natl. Mus. 45 : 50), may be briefly characterized as follows: Antennae 13-segmented; eyes bare (incorrectly described by Ashmead as hairy) and always far removed from posterior margin of head; pronotum long, immargined, narrowed anteriorly; mesoscutum short, the notaulices not or weakly indicated in the female, often well marked, though rarely complete, in the male; scutellum separated from mesoscutum by a deep furrow; propodeum with dorsal surface much longer than the abruptly declivous posterior surface, separated from the latter by a transverse carina, and provided with one or more longitudinal carinae that are better developed in the female than in the male, lateral margins carinate; femora, especially

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anterior and posterior femora of female, somewhat swollen; wings well developed, anterior wing with median and submedian cells closed, without a true stigma but with a short thickened marginal vein, with basal vein unbranched and with radius very short, at most only a little longer than the short basal vein.

Genotype.—*Laelius trogodermitis* Ashmead (by original designation).

KEY TO THE NORTH AMERICAN SPECIES OF LAELIUS.

1. Wings entirely clear hyaline; pedicel of male antenna at least as long as first flagellar segment.....2
 - Anterior wing distinctly somewhat clouded; pedicel of male antenna shorter than first flagellar segment (male of *occidentalis* unknown).....3
2. Distance from eye to vertex nearly equal to eye height; ocellar triangle equilateral; radius as long as basal vein in both sexes; notaulices not apparent; propodeum of female with 3 complete longitudinal carinae centrally and without transverse rugae between the carinae.....*voracis*, new species
 - Distance from eye to vertex little more than half eye height; ocellar triangle not equilateral; radius, at least in female, much shorter than basal vein; notaulices distinct in male; propodeum of female with five longitudinal carinae centrally and with transverse rugae between the carinae.....*trogodermitis* Ashmead
3. All femora and the scape piceous to blackish.....4
 - All femora and the scape yellow.....*tricarinatus* Ashmead
4. The three central carinae of dorsal face of female propodeum complete. Male unknown.....*occidentalis* Whittaker
 - Only the median carina of dorsal face of female propodeum complete, the two others of the central group obsolescent apically.....*utilis* Cockerell

Laelius voracis, new species.

In its completely hyaline wings and darkened legs, as well as in the structure of the male antenna, this species resembles *trogodermitis* Ashmead, while in the uniform development of the three central carinae of the female propodeum it is most similar to *tricarinatus* Ashmead. It may be distinguished from all described North American species, however, by its relatively long and slightly curved stigmal vein and the uniform reticulation of the central areas on the female propodeum.

Female.—Length 2.2 mm. Frons weakly reticulate and strongly shining; distance from eye to vertex about equal to eye height; vertex closely, shallowly punctate and subopaque; ocellar triangle equilateral; ocellular line at least twice as long as postocellar line; pedicel of antenna fully one and one-half times as long as first flagellar segment; flagellar segments subequal in length, slightly longer than broad. Mesonotum strongly shining, weakly reticulate; notaulices not apparent; dorsal face of propodeum about as wide at apex as at base, subopaque and finely reticulate, with three complete longitudinal carinae centrally, also with a short basal one each

side of this group nearer to submedian carina than to lateral margin and extending barely to middle, the areas enclosed by the central carinae not transversely rugose; posterior face of propodeum evenly but delicately reticulate, with a weak median longitudinal carina; metapleuron sculptured like posterior face of propodeum; radius about as long as basal vein, slightly curved, its apical half a little thickened. Abdomen smooth and polished.

Black; antennae, mandibles and legs brownish to piceous; wings completely hyaline, veins hyaline.

Male.—Essentially like the female except in the following particulars: Pedicel slightly longer than first flagellar segment; dorsal face of propodeum narrowing a little caudad, with the three central carinae incomplete, extending barely to the apical third; median carina of posterior face of propodeum indistinct or wanting.

Type.—U. S. National Museum, No. 53567.

Type locality.—Washington, D. C.

Host.—*Anthrenus vorax* Waterhouse.

Described from seventeen females and three males reared by E. A. Back.

Laelius trogodermais Ashmead.

Laelius trogodermais Ashmead, Bull. U. S. Natl. Mus. 45 : 51, 1893.

This species is readily distinguished by the characters mentioned in the key. In addition to the usual three longitudinal carinae on the middle two-fifths of the dorsal face of the propodeum there is a somewhat weaker and more irregular, but distinct, longitudinal ridge between the median carina and each of the other two principal carinae of the central group; the dorsal face of the male propodeum is finely obliquely aciculate within the apical lateral angles. The notaulices are indicated posteriorly in the female and are distinct on at least the posterior half of the mesoscutum in the male. As in *voracis* and *utilis* the antennal scape and the legs, especially the femora, are piceous.

Known only from the type and allotype, which were reared from *Trogoderma* larvae found in an insect collection at Washington, D. C., and from a single female taken in Jacksonville, Fla., which was incorrectly included by Ashmead in his type series of *tricarinatus*. All three specimens are in the collection of the U. S. National Museum.

Laelius tricarinatus Ashmead.

Laelius tricarinatus Ashmead, Bull. U. S. Natl. Mus. 45 : 51, 1893.

Laelius rufipes Ashmead, Bull. U. S. Natl. Mus. 45 : 51, 1893. New synonymy.

Laelius nigripilosus Ashmead, Bull. U. S. Natl. Mus. 45 : 52, 1893. New synonymy.

Bethylus constrictus Ashmead, Bull. U. S. Natl. Mus. 45 : 53, 1893. New synonymy.

Laelius fumipennis Brues, Bull. Wisc. Soc. Nat. Hist. 8 (1) : 45, 1910. New synonymy.

Laelius försteri Kieffer (n. n. for *rufipes* Ashmead, preoccupied), Das Tierreich, Lief. 41, Bethyridae, p. 565, 1914.

The types of all the names listed above, except *fumipennis*, are in the National Museum and have been studied. I have not seen the type of *fumipennis*, which was distinguished by Brues on the basis of the conspicuously fuscous apical half of the fore wing. However, since there is considerable variation in the intensity of infuscation of the fore wing in the specimens examined that are regarded as *tricarinatus*, I do not believe *fumipennis* can be held distinct on this character. Miscounting the number of antennal segments, Ashmead was led to place *constrictus* in *Bethylus*. The type, however, has 13-segmented antennae and, in my opinion, not only belongs in *Laelius* but is conspecific with the type of *tricarinatus*.

Female.—Eye only slightly longer than the distance from it to posterior margin of head; pedicel longer than first flagellar segment; ocelli in an equilateral triangle; notaulices indicated posteriorly; propodeum finely transversely rugulose with three well developed complete central longitudinal carinae and a short basal one each side midway between the outer central carina and the lateral margin, this short carina not extending beyond middle of propodeum; scape and all femora entirely yellow; anterior wing somewhat infuscated on apical half.

Male.—Eyes relatively a little larger than in the female; first flagellar segment of antenna distinctly longer than pedicel; notaulices distinct at least from posterior margin to middle of mesoscutum; propodeum not transversely rugulose but evenly shallowly punctate, the punctures contiguous, none of the longitudinal carinae complete. Otherwise essentially like the female.

The available material is not adequate to give a satisfactory picture of the distribution of the species. There is a single specimen from West Cliff, Colo., and *rufipes* is said by Ashmead to be from the "Western States"; all the remaining specimens examined are from the Atlantic Seaboard. On what grounds *rufipes* was recorded from the West can not now be determined; the two specimens comprising the type material bear no locality data, and when Ashmead entered the species in the National Museum type catalogue the space for the locality was left blank.

Only two specimens of those studied have host records associated with them. Both are labeled as reared from *Anthrenus verbasci* (L.) by E. A. Back, one at Washington, D. C., the other at Pacolet, S. C.

Laelius occidentalis Whittaker.

Laelius occidentalis Whittaker, Trans. Ent. Soc. Lond., 1928, p. 387, fig. 3.

I know this species only from the original description. It appears to resemble *utilis* very closely but to be distinguished, in the female, by having all three of the central propodeal carinae complete. The wings are said to be slightly clouded and the antennae, coxae and femora black.

The unique type, from Chilliwack, British Columbia, is in the Whittaker Collection. It is the only known specimen.

Laelius utilis Cockerell.

Laelius utilis Cockerell, Canad. Ent. 52 : 34, 1920.

As stated under *occidentalis*, that species and *utilis* appear to be extremely similar, the only basis for distinguishing them, so far as I can determine without having specimens of *occidentalis* for study, consisting in the development of the three central propodeal carinae of which only the median one is complete in *utilis*.

The female holotype and a paratype, both recorded as having developed on anthrenid larvae in an insect collection at Lynchburg, Va., are in the collection of the U. S. National Museum, which contains five additional specimens of this species. One of these is labeled as "found with *Trogoderma tarsale*," at Washington, D. C.; two are from uncertain localities and without indication of probable hosts; one is from Hagerstown, Md., and one from Salisbury, N. C. The last is recorded as reared from *Bruchus brachialis* Fahr., but this record seems open to some question.